



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

62658

7590

12/09/2010

MERCHANT & GOULD  
SCIENTIFIC ATLANTA, A CISCO COMPANY  
P.O. BOX 2903  
MINNEAPOLIS, MN 55402-0903

EXAMINER

MENDOZA, JUNIOR O

ART UNIT

PAPER NUMBER

2423

DATE MAILED: 12/09/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/663,037	09/15/2003	Ajith N. Nair	60374.0007U/S01/CPOL968414	2530
TITLE OF INVENTION: RESOURCE-ADAPTIVE MANAGEMENT OF VIDEO STORAGE				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$1510	\$1510	03/09/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop **ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
 or Fax (571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the **ISSUE FEE** and **PUBLICATION FEE** (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

62658 7590 12/09/2010

**MERCHANT & GOULD**  
**SCIENTIFIC ATLANTA, A CISCO COMPANY**  
**P.O. BOX 2903**  
**MINNEAPOLIS, MN 55402-0903**

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop **ISSUE FEE** address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/663,037 09/15/2003

Ajith N. Nair

60374.0007US01/CPOL/968414

2530

**TITLE OF INVENTION: RESOURCE-ADAPTIVE MANAGEMENT OF VIDEO STORAGE**

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$1510	\$1510	03/09/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
MENDOZA, JUNIOR O	2423	725-142000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number** is required.

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2  
 3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims **SMALL ENTITY** status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming **SMALL ENTITY** status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.**

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/663,037

09/15/2003

Ajith N. Nair

60374.0007US01/CPOL968414

2530

62658

7590

12/09/2010

MERCHANT & GOULD  
SCIENTIFIC ATLANTA, A CISCO COMPANY  
P.O. BOX 2903  
MINNEAPOLIS, MN 55402-0903

EXAMINER

MENDOZA, JUNIOR O

ART UNIT

PAPER NUMBER

2423

DATE MAILED: 12/09/2010

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 987 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 987 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

10/663,037

**Applicant(s)**

NAIR ET AL.

**Examiner**

JUNIOR O. MENDOZA

**Art Unit**

2423

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/21/2010.
2. ☒ The allowed claim(s) is/are 1,2,5,7-9,12,17-19,21-25,41-47,51-61 and 63-68.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

/Andrew Y Koenig/  
Supervisory Patent Examiner, Art Unit 2423

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 10/21/2010 has been entered.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 10/21/2010 was filed after the Notice of Allowance mailed on 08/16/2010. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

## **EXAMINER'S AMENDMENT**

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Rodack on 06/25/2010.

4. The application has been amended as follows:

In **claim 23**, line 10, "sufficiency of processing resources." has been changed to  
- - sufficiency of processing resources;

further comprising a multiplexer, wherein the encoder is further configured to:  
receive, in parallel to the plural digitized pictures, second plural digitized pictures  
of a second picture sequence and compressed pictures, the received pictures  
corresponding to a first format; and

further compress, in parallel to the plural digitized pictures of the picture  
sequence, the second plural digitized pictures of the second picture sequence to  
produce, in association with the multiplexer, a transport stream comprising a multiplex  
of the video stream and the compressed second plural digitized pictures, the transport  
stream pictures corresponding to a second format different than the first. - -

Cancel **claim 62**.

In **claim 63**, line 1, "The STT of claim 62" has been changed to - - The STT of  
claim 23 - -.

In **claim 65**, line 1, "The STT of claim 62" has been changed to - - The STT of claim 23 - -.

In **claim 68**, line 1, "The STT of claim 62" has been changed to - - The STT of claim 23 - -.

***Allowable Subject Matter***

5. Claims 1, 2, 5, 7-9, 12, 17-19, 21-25, 41-47, 51-61 and 63-68 are allowed.

Regarding **claim 1**, the applicant's arguments filed on the appeal brief of 04/19/2010 are persuasive. Furthermore, the examiner notes that the multiplexing and demultiplexing scheme of Artigas et al. (Pub No US 2001/0014206) is implemented by a magnetic recording head composed of a matrix which physically multiplexes data on the recording tape in parallel locations of the recording tape, which is different then parallel encoding and multiplexing video into a transport stream (i.e. MPEG-2).

The examiner examined IDS submitted on 10/21/2010 and notes that the multiplexing of commonly assigned application Nallur et al. (Pub No US 2005/0022245) takes place between the compressed audio and video content of the same video program, see paragraph [0041]. While paragraph [0042] does describe the compression and multiplexing of a plurality of videos in parallel, Nallur still fails to disclose or reasonably suggest "a multiplex of a corresponding first compressed video stream and

a second compressed video stream, respectively". Since, Nallur only teaches that the audio and video content from the same program are multiplexed with each other, unlike the allowable feature of the current application which multiplexes two compressed video streams respectively.

Hence, prior art of record fails to show or reasonably suggest encoding in parallel plural digitized pictures of a first picture sequence corresponding to a first video stream of the plural received video streams and a second picture sequence corresponding to a second video stream of the plural received video streams to produce a transport stream comprising "a multiplex of a corresponding first compressed video stream and a second compressed video stream, respectively", the first and second video streams having the first format and the first and second compressed video streams having the second format, in combination with all the other limitations presented in claim 1. Therefore, independent claim 1 is allowable.

Regarding dependent **claims 2, 5, 7-9, 12, 17-19, 21, 22 and 56 - 61**, they are also held allowable since they depend from allowable claim 1.



Regarding **claim 23**, the applicant's arguments filed on the appeal brief of 04/19/2010 are persuasive. Furthermore, the examiner notes that the multiplexing and demultiplexing scheme of Artigas et al. (Pub No US 2001/0014206) is implemented by a magnetic recording head composed of a matrix which physically multiplexes data on the recording tape in parallel locations of the recording tape, which is different than parallel encoding and multiplexing video into a transport stream (i.e. MPEG-2).

The examiner examined IDS submitted on 10/21/2010 and notes that the multiplexing of commonly assigned application Nallur et al. (Pub No US 2005/0022245) takes place between the compressed audio and video content of the same video program, see paragraph [0041]. While paragraph [0042] does describe the compression and multiplexing of a plurality of videos in parallel, Nallur still fails to disclose or reasonably suggest "a multiplex of a corresponding first compressed video stream and a second compressed video stream, respectively". Since, Nallur only teaches that the audio and video content from the same program are multiplexed with each other, unlike the allowable feature of the current application which multiplexes two compressed video streams respectively.

Hence, prior art of record fails to show or reasonably suggest a multiplexer, wherein the encoder is further configured to: receive, in parallel to the plural digitized pictures, second plural digitized pictures of a second picture sequence and compressed pictures, the received pictures corresponding to a first format; and further compress, in parallel to the plural digitized pictures of the picture sequence, the second plural digitized pictures of the second picture sequence "to produce, in association with the

Art Unit: 2423

multiplexer, a transport stream comprising a multiplex of the video stream and the compressed second plural digitized pictures", the transport stream pictures corresponding to a second format different than the first, in combination with all the other limitations presented in claim 23. Therefore, independent claim 23 is allowable.

Regarding dependent **claims 24, 25, 41-47, 51-55 and 63-68**, they are also held allowable since they depend from allowable claim 23.

**Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUNIOR O. MENDOZA whose telephone number is (571)270-3573. The examiner can normally be reached on Monday - Friday 9am - 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Koenig can be reached on (571)272-7296. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Junior O Mendoza  
Examiner  
Art Unit 2423

/J. O. M./  
November 24, 2010

/Andrew Y Koenig/  
Supervisory Patent Examiner, Art Unit 2423